

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method of immunizing a vertebrate against a virus selected from an influenza virus and a rotavirus, said method comprising administering to a vertebrate a composition consisting essentially of a set of plasmid ~~vector~~ vectors in a physiologically acceptable medium, the plasmid vectors comprising DNA encoding an influenza virus antigen or a rotavirus antigen operatively linked to DNA which is a promoter ~~region~~, whereby a humoral immune response, a cell-mediated immune response, or both is elicited against the antigen.
2. (Currently amended) The method of Claim 1, wherein the promoter ~~region~~ of the plasmid ~~vector~~ vectors is of nonretroviral origin.
3. (Currently amended) The method of Claim 1, wherein the ~~promoter region~~ promoter of the plasmid ~~vector~~ vectors is of retroviral origin.
4. (Previously presented) The method of Claim 1, wherein the antigen is capable of eliciting a protective immune response against an infectious agent.
5. (Canceled)
6. (Previously presented) The method of Claim 1, wherein the virus is an influenza virus.
7. (Previously presented) The method of Claim 6, wherein the antigen is an influenza virus hemagglutinin.
8. (Previously presented) The method of Claim 1, wherein the virus is a rotavirus.

9.-10. (Canceled)

11. (Original) The method of Claim 1, wherein the vertebrate is a mammal.

12. (Previously presented) The method of Claim 11, wherein the mammal is a human.

13. (Currently amended) The method of Claim 1, wherein the ~~plasmid vector, in a physiologically acceptable carrier composition~~[[.]] is administered to a vertebrate through a route of administration selected from the group consisting of: intravenous, intramuscular, intraperitoneal, intradermal and subcutaneous.

14. (Currently amended) The method of Claim 1, wherein the ~~plasmid vector composition~~ is administered to a vertebrate by contacting the ~~plasmid vector, in a physiologically acceptable carrier, composition~~ [[with]] to a mucosal surface of the vertebrate.

15. (Currently amended) ~~The method of Claim 1,~~ A method of immunizing a vertebrate against a virus selected from an influenza virus and a rotavirus, said method comprising administering to a vertebrate a composition consisting essentially of a set of microsphere encapsulated plasmid vectors in a physiologically acceptable medium, the plasmid vectors comprising DNA encoding an influenza virus antigen or a rotavirus antigen operatively linked to DNA which is a promoter, wherein the plasmid vector is microsphere encapsulated, and composition is administered to a vertebrate by contacting ~~microsphere encapsulated plasmid vector, in a physiologically acceptable carrier, the composition~~ [[with]] to a mucosal surface of the vertebrate, and whereby a humoral immune response, a cell-mediated immune response, or both is elicited against the antigen.

16. (Currently amended) A method of immunizing a vertebrate against a virus selected from an influenza virus and a rotavirus, said method comprising administering to a vertebrate a composition consisting essentially of two [[one]] or more sets of plasmid vectors in a physiologically acceptable medium, each plasmid vector comprising DNA encoding an influenza virus antigen or antigens, or a rotavirus antigen or antigens operatively linked to DNA which is a

promoter ~~region~~, whereby a humoral immune response, a cell-mediated immune response or both is elicited against the antigen or antigens.

17. (Currently amended) A method of immunizing a vertebrate against[[,]] a virus selected from an influenza virus and a rotavirus said method comprising administering to a mucosal surface of the vertebrate a composition consisting essentially of a set of plasmid ~~vector~~ vectors in a physiologically acceptable medium, the plasmid vector comprising DNA encoding an influenza virus antigen or a rotavirus antigen operatively linked to DNA which is a promoter region, ~~in a physiologically acceptable carrier,~~ thereby eliciting a humoral or cell-mediated immune response, or both, against the antigen, whereby the vertebrate is protected from disease caused by the virus.

18. (Currently amended) The method of Claim 17, wherein the promoter ~~region~~ of the plasmid ~~vector~~ vectors is of nonretroviral origin.

19. (Currently amended) The method of Claim 17, wherein the promoter ~~region~~ of the plasmid ~~vector~~ vectors is of retroviral origin.

20. (Original) The method of Claim 17, wherein the mucosal surface is a respiratory mucosal surface.

21. (Original) The method of Claim 20, wherein the respiratory mucosal surface is a nasal mucosal surface.

22. (Original) The method of claim 20, wherein the respiratory mucosal surface is a tracheal mucosal surface.

23. (Currently amended) ~~The method of Claim 17,~~ A method of immunizing a vertebrate against a virus selected from an influenza virus and a rotavirus, said method comprising administering to a vertebrate a composition consisting essentially of a set of microsphere encapsulated plasmid vectors in a physiologically acceptable medium, wherein the plasmid ~~vector~~ vectors is microsphere-encapsulated comprising DNA encoding an influenza virus

antigen or a rotavirus antigen operatively linked to DNA which is a promoter region, thereby eliciting a humoral or cell-mediated immune response, or both, against the antigen, whereby the vertebrate is protected from disease caused by the virus.

24. (Canceled)

25. (Previously presented) The method of Claim 17, wherein the virus is an influenza virus.

26. (Previously presented) The method of Claim 25, wherein the antigen is an influenza virus hemagglutinin.

27. (Previously presented) The method of Claim 17, wherein the virus is a rotavirus.

28.-29. (Canceled)

30. (Original) The method of Claim 17, wherein the vertebrate is a mammal.

31. (Original) The method of Claim 30, wherein the mammal is a human.

32. (Currently amended) A method of immunizing a vertebrate against a virus selected from an influenza virus and a rotavirus, said method comprising administering parenterally to the vertebrate a set of plasmid vectors ~~plasmid vector~~ comprising DNA encoding an influenza virus antigen or a rotavirus antigen operatively linked to DNA which is a promoter region, ~~in a physiologically acceptable carrier,~~ wherein the plasmid vectors are administered with a gene gun, thereby eliciting a humoral or cell-mediated immune response, or both, against the antigen, whereby the vertebrate is protected from disease caused by the ~~infectious agent~~ virus.

33. (Currently amended) The method of Claim 32, wherein the route of administration is chosen from the group consisting of ~~intravenous~~, intramuscular, ~~intraperitoneal~~, intradermal and subcutaneous.

34. (Currently amended) The method of Claim 32, wherein the promoter ~~region~~ of the plasmid ~~vector~~ vectors is of nonretroviral origin.

35. (Currently amended) The method of Claim 32, wherein the promoter ~~region~~ of the plasmid ~~vector~~ vectors is of retroviral origin.
36. (Canceled)
37. (Currently amended) The method of Claim ~~[[36]]~~ 32, wherein the virus is an influenza virus.
38. (Previously presented) The method of Claim 37, wherein the antigen is an influenza virus hemagglutinin.
39. (Currently amended) The method of Claim ~~[[36]]~~ 32, wherein the virus is a rotavirus.
- 40.-41. (Canceled)
42. (Original) The method of Claim 32, wherein the vertebrate is a mammal.
43. (Original) The method of Claim 42, wherein the mammal is a human.
- 44.-51. (Canceled)
52. (Currently amended) A method of immunizing a mammal against an influenza virus, said method comprising administering to the mammal a composition consisting essentially of one or more sets of plasmid ~~vector~~ vectors in a physiologically acceptable medium, each plasmid ~~vector~~ comprising DNA encoding an antigen of the influenza virus operatively linked to DNA which is a promoter ~~region~~, in a physiologically acceptable carrier, and thereby eliciting a humoral or cell-mediated immune response, or both, against the antigen, whereby the vertebrate is protected from disease caused by the influenza virus.
53. (Currently amended) The method of Claim 52, wherein the ~~plasmid-vector~~ composition comprises two ~~is administered in combination with one or more additional~~ plasmid vectors, each comprising DNA encoding a different antigen of an influenza virus operatively linked to a promoter ~~region~~.

54. (Original) The method of Claim 53, wherein the different antigens are from different subtypes of influenza.

55. (Original) The method of Claim 53, wherein the different antigens are from different subgroups of influenza.

56. (Original) The method of Claim 53, wherein the different antigens are from different subgroups and different subtypes of influenza.